

# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference PCT02633	<b>FOR FURTHER ACTION</b>		See item 4 below
International application No. PCT/JP2004/004885	International filing date ( <i>day/month/year</i> ) 02 April 2004 (02.04.2004)	Priority date ( <i>day/month/year</i> ) 08 April 2003 (08.04.2003)	
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237			
Applicant HITACHI MEDICAL CORPORATION			

<p>1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 <i>bis</i>.1(a).</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p>In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.</p>																
<p>3. This report contains indications relating to the following items:</p> <table> <tr> <td><input checked="" type="checkbox"/> Box No. I</td> <td>Basis of the report</td> </tr> <tr> <td><input type="checkbox"/> Box No. II</td> <td>Priority</td> </tr> <tr> <td><input type="checkbox"/> Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td><input type="checkbox"/> Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td><input checked="" type="checkbox"/> Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td><input type="checkbox"/> Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td><input type="checkbox"/> Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td><input type="checkbox"/> Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table> <p>4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).</p>	<input checked="" type="checkbox"/> Box No. I	Basis of the report	<input type="checkbox"/> Box No. II	Priority	<input type="checkbox"/> Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	<input type="checkbox"/> Box No. IV	Lack of unity of invention	<input checked="" type="checkbox"/> Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	<input type="checkbox"/> Box No. VI	Certain documents cited	<input type="checkbox"/> Box No. VII	Certain defects in the international application	<input type="checkbox"/> Box No. VIII	Certain observations on the international application
<input checked="" type="checkbox"/> Box No. I	Basis of the report															
<input type="checkbox"/> Box No. II	Priority															
<input type="checkbox"/> Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability															
<input type="checkbox"/> Box No. IV	Lack of unity of invention															
<input checked="" type="checkbox"/> Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement															
<input type="checkbox"/> Box No. VI	Certain documents cited															
<input type="checkbox"/> Box No. VII	Certain defects in the international application															
<input type="checkbox"/> Box No. VIII	Certain observations on the international application															

<p>The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland</p> <p>Facsimile No. +41 22 740 14 35</p>		<p>Date of issuance of this report 02 March 2006 (02.03.2006)</p> <p>Authorized officer  Masashi Honda</p> <p>Telephone No. +41 22 338 70 10</p>
--	--	--

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

To:

# PCT

**Translation**

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Applicant's or agent's file reference <b>PCT02633</b>		Date of mailing (day/month/year)
International application No. <b>PCT/JP2004/004885</b>		International filing date (day/month/year) <b>02.04.2004</b>
International Patent Classification (IPC) or both national classification and IPC		Priority date (day/month/year) <b>08.04.2003</b>
Applicant <b>HITACHI MEDICAL CORPORATION</b>		

1. This opinion contains indications relating to the following items:

<input checked="" type="checkbox"/>	Box No. I	Basis of the opinion
<input type="checkbox"/>	Box No. II	Priority
<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/>	Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/>	Box No. VI	Certain documents cited
<input type="checkbox"/>	Box No. VII	Certain defects in the international application
<input type="checkbox"/>	Box No. VIII	Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/JP	Authorized officer
Facsimile No.	Telephone No.

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2004/004885

Box No. I      Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.  
☐ This opinion has been established on the basis of a translation from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material  
☐ a sequence listing  
☐ table(s) related to the sequence listing
  - b. format of material  
☐ in written format  
☐ in computer readable form
  - c. time of filing/furnishing  
☐ contained in the international application as filed.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/JP2004/004885

Box No. V	Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
<b>1. Statement</b>			
Novelty (N)	Claims	3-7, 9-11, 13-15	YES
	Claims	1, 2, 8, 12	NO
Inventive step (IS)	Claims	4-7	YES
	Claims	1-3, 8-15	NO
Industrial applicability (IA)	Claims	1-15	YES
	Claims		NO
<b>2. Citations and explanations:</b>			
<p>Document 1: JP, 5-253225, A (ALOKA CO., LTD.)</p> <p>Document 2: JP, 2-154745, A (FUJI ELECTRIC CO., LTD.)</p> <p>Document 3: JP, 5-138, A (Yokogawa Medical System, Ltd.)</p> <p>Document 4: JP, 60-177766, A (NEC Corporation)</p> <p> Claims 1, 2, 8, and 12</p> <p>Document 1 describes an ultrasonograph used for judging when a probe is left in the air on the basis of image B, stopping the drive signal after a certain period of time, and restoring the energy of the drive signal to its original state according to the instructions from a control section (see the 31st line of the second paragraph to the 3rd line of the fourth paragraph).</p> <p>Accordingly, the subject matters of claims 1, 2, 8, and 12 do not appear to be novel in view of document 1.</p> <p> Claim 3</p> <p>Document 1 describes that the probe is judged to be left in the air when the deep portion of a living body has low brightness level because attention is paid to the fact that the deep portion of the living body has low brightness level when the probe is left in the air. However, document 2 describes that the probe is judged to be left in the air when the multiple echo area of a shallow portion has high brightness because attention is paid to the fact that this area has high brightness level when the probe is left in the air (see the 16th line in the lower left paragraph in page 5 to 6th line in the lower right paragraph in page 5).</p> <p>Therefore, it is also considered to be obvious for a person skilled in the art to comprise the invention as set forth in the subject matters of claim 3 on the basis of the invention as described in the subject matters of claims 1, 2.</p> <p> Claim 9</p> <p>Document 3 describes that the pulse rate is reduced when the probe is left in the air (see the 38th line in the second paragraph to the 1st line of the third paragraph).</p> <p>Therefore, it is also considered to be obvious for a person skilled in the art to comprise the invention as set forth in the subject matter of claim 9 on the basis of the invention as described in the subject matters of claims 1, 3.</p>			

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2004/004885

Box No. V	Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
-----------	--

Claims 10, 11, 13-15

Notifying beforehand the fact that an apparatus changes its state without an intention of an operator is well-known art as described, for example, in document 4 (the second to 16th line in the lower right paragraph in page 1).

Therefore, it is also considered to be obvious for a person skilled in the art to comprise the invention as described in claims 10, 11, 13-15 according to the invention as described in document 1 or the aforementioned well-known art.

Claims 4-7

It is not described in any documents cited in the ISR and also considered to be non-obvious for a person skilled in the art to judge the probe to be left in the air on the basis of dispersed value of Doppler signal and dispersion value of brightness and hue of a CFM image.